

MCDONNELL DOUGLAS

McDonnell Douglas Aerospace

NOV 02 1995

HI2-014C-10700  
WBS: 3200

Subject: Contract N00019-92-C-0059; Modification 95-P7-ZA629; Memorandum of Agreement (MOA) for the F/A-18E/F Engineering and Manufacturing Development Integrated Test Team; Modification Acceptance Letter

To: Commander  
Naval Air System Command (AIR-2.2.5E, J. R. Cuskey)  
Naval Air Systems Command Headquarters  
1421 Jefferson Davis Highway  
Arlington, VA 22243-5120

Enclosure: (1) Signed Copy of Modification 95-P7-ZA629

1. McDonnell Douglas Aerospace (MDA) is pleased to provide, as Enclosure (1), a signed copy of the subject modification. The signed documents are provided for NAVAIR's approval and execution. It is requested that upon execution by your office, a copy be provided to MDA.

2. Please address any questions concerning this transmittal to the undersigned at (3 14) 233-0272.

*T. O. Haenni*  
T. O. Haenni  
F/A- 18E/F Contracts & Pricing

EC: DPRO R. Best (306 1375) w/encl

IC:	Elmendorf, T. J.	2702641	w/encl
	Haenni, T. O.	2702641	w/encl
	Martin, J. W.	2703295	w/encl
	Pilcher, C. D.	2703210	w/encl
	Project Files	2701163	wo/encl
	Master Files	2704503	w/encl
	Contract Files	2702641	w/encl

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T. O. Haenni  
F/A- 18E/F Contracts & Pricing

EC: DPRO R. Best (3061375) w/encl

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE 18 SEP 95	4. REQUISITION/PURCHASE REQ. NO. N00019-95-P7-2A629	5. PROJECT NO. (If applicable) F/A-18E/F		
6. ISSUED BY CODE N00019 Naval Air Systems Command AIR-2.2.5E.1 LCDR J.R. CUSKEY 1421 Jefferson Davis Hwy Arlington, VA 22243- 703-604-6100x3578		7. ADMINISTERED BY (If other than 1000) CODE g2606A DEFENSE PLANT REPRESENTATIVE OFFICE MCDONNELL DOUGLAS CORPORATION P.O. BOX 516 ST. LOUIS, MO 63166-0516			
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) MCDONNELL DOUGLAS CORPORATION MCDONNELL AIRCRAFT COMPANY P.O. BOX 516 ST. LOUIS, MO 63166-0516				9A. AMENDMENT OF SOLICITATION NO. 9B. DATED (SEE ITEM 11) 10A. MODIFICATION OF CONTRACT/ORDER NO. N00019-92-C-0059 10B. DATED (SEE ITEM 13) 20JUL92	
CODE 76301 FACILITY CODE				OCT 11 1995	

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

NOT APPLICABLE

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

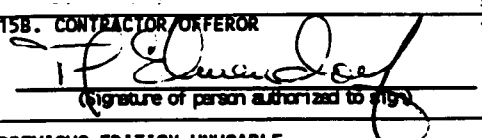
- (/ ) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
- B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
- X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:  
CONTRACT ATTACHMENT (4) AND MUTUAL AGREEMENT OF THE PARTIES
- D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE ATTACHED CONTRACT ATTACHMENT (23), "MEMORANDUM OF AGREEMENT FOR THE F/A-18E/F ENGINEERING AND MANUFACTURING DEVELOPMENT INTEGRATED TEST TEAM"

Except as provided herein, all terms and conditions of the document referenced in Items 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) T. J. Elmendorf Group Manager F/A-18E/F Contracts & Pricing		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) JEFFREY R. CUSKEY CONTRACTING OFFICER NAVAL AIR SYSTEMS COMMAND	
15B. CONTRACTOR/ORFEE  (Signature of person authorized to sign)	15C. DATE SIGNED 11/2/95	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED

PREVIOUS EDITION UNUSABLE  
( ) (JRC)

COMPUTER GENERATED STANDARD FORM 30 (REV. 10-83)

In order to incorporate the Memorandum of Agreement for F/A- 18E/F Engineering and Manufacturing Development Integrated Test Team, pursuant to Contract Attachment (4) paragraph 1.21 of Addendum No. 131 to MIL-D-8708B(AS), the above numbered contract is hereby modified as follows:

1. Under Section J, "Documents, Exhibits and Other Attachments", the following changes are made:

a Add the following Contract Attachment title after Attachment (22): "Attachment (23) - Memorandum of Agreement for the F/A-18E/F Engineering and Manufacturing Development Integrated Test Team, signed 18 Sep 95"

b. The attached "Memorandum of Agreement for the F/A-18E/F Engineering and Manufacturing Development Integrated Test Team" is hereby added as Contract Attachment (23).

3. In accordance with Contract Attachment ( 4 ) paragraph 1.2.1 of Addendum No. 131 to MIL-D-8708B(AS). and by mutual agreement of the parties. all consideration due either party is contained herein. -

4. This modification results in no change in the Limitation of Government Liability as specified in Special Contract Requirement H-7 of Contract N00019-92-C-0059.

5. All other terms and conditions of Contract No. N00019-92-C-0059 remain unchanged and in full force and effect.

25 August 1995

MEMORANDUM OF AGREEMENT  
F/A-18E/F ENGINEERING AND MANUFACTURING DEVELOPMENT  
INTEGRATED TEST TEAM

BETWEEN  
MCDONNELL DOUGLAS AEROSPACE  
AND  
F/A-18 PROGRAM MANAGER

APPROVED BY:



G.E. Daniels  
VP-GM F/A-18E/F  
McDonnell Douglas Aerospace



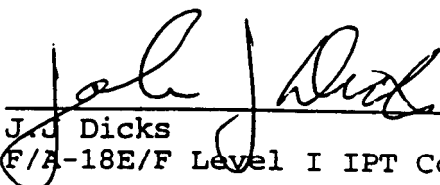
Date



W. Shepherd  
Captain, U.S. Navy  
F/A-18E/F Level I IPT Co-Leader



Date



J.J. Dicks  
F/A-18E/F Level I IPT Co-Leader



Date

## MEMORANDUM OF AGREEMENT

### F/A-18E/F ENGINEERING MANUFACTURING DEVELOPMENT

1.0 INTRODUCTION/OBJECTIVES Naval Air Systems Command (NAVAIRSYSCOM) and the contractor, McDonnell Douglas Aerospace (MDA), are parties to a contract for Engineering and Manufacturing Development (EMD) of the F/A-18E/F aircraft. The NAVAIRSYSCOM has designated the Naval Air Warfare Center Aircraft Division (NAWCAD), Patuxent River, MD as the principal site for Development, Test and Evaluation (DT&E) of the F/A-18E/F aircraft. In accordance with Addendum No. 131 to MIL-D-8708B(AS), the F/A-18E/F EMD flight test program shall be conducted under an integrated contractor and government team concept. The purpose, scope and requirements of government Development Testing (DT), including Navy Technical Evaluation (TECHEVAL), will be accomplished by incorporating government test requirements and objectives into integrated contractor and government test plans. To this end, the contractor and government shall form an Integrated Test Team (ITT) to conduct all contractually required functional, system, and flight tests. The contractor is responsible for developing the aircraft and demonstrating to NAVAIRSYSCOM that the aircraft complies with contract specifications and as such retains overall lead of the ITT. Government participation in the ITT will include pilots, engineers, technicians, and aircrew personnel. The foregoing does not relieve the contractor of his ultimate responsibility for management (including cost and schedule), conduct, and satisfactory conclusion of the EMD program and timely submittal of test data, reports, and plans as required by the contract.

1.1 Integrated testing is intended to enhance F/A-18E/F development and demonstration by:

(a) Accomplishing development test objectives through combined contractor and government EMD flight testing, eliminating redundant government/contractor testing, thereby reducing the number of flight hours that would be required for separate dedicated government test and evaluation efforts.

(b) Providing for early and continual government pilot evaluation of aircraft systems as related to specifications and intended mission. The development process is enhanced through early identification of deficiencies, assessment of corrections to deficiencies, and continual emphasis on mission capability.

(c) Providing for Navy engineers to participate with contractor engineers in the planning, conduct and analysis of integrated development and demonstration tests. This ensures that Navy specific tests and test scenarios are incorporated into the EMD plan and improves the Navy's understanding of the F/A-18E/F systems function and performance in terms of mission effectiveness.

2.0 SCOPE This Memorandum of Agreement (MOA) describes the way the parties involved intend to carry out the F/A-18E/F EMD Integrated Flight Test Program. It has been developed pursuant to Attachment 4 (Addendum 131 to MIL-D-8708 (AS)) of Contract N00019-92-C-0059 and, as such, is intended to be appended to the contract by the Procuring Contracting Officer (PCO) via a formal contract modification. Compliance with this MOA is agreed by the parties to be fully within the scope of the F/A-18E/F Engineering and Manufacturing Development (E&MD) contract. Therefore, contractual incorporation of and compliance with this MOA shall not result in any increase in the target cost or incentive and award fees of Contract N00019-92-C-0059, and authorizes no change in contract terms and/or conditions. In the event of conflict or inconsistency between this MOA and the contract, such inconsistency will be resolved by following the Order of Precedence clause in the contract (H-17).

2.1 This MOA defines contractor/government agreements on the following aspects of integrated testing and the roles and functions of the ITT:

- (a) Ground Rules (section 3.0)
- (b) ITT Management Structure (section 4.0)
- (c) Navy/Contractor Roles, Responsibilities, and Authority (section 4.2)
- (d) ITT Management Interface (section 4.3)
- (e) Concept of Operations for Integrated Test Team (section 5.0)
- (f) Test Requirements Flow Down (section 5.1)
- (g) Test Plan Generation, Approval, and Amendment (section 5.2)
- (h) Test Card Creation, Procedures, and Approval (section 5.3)
- (i) Selection and Approval of Aircrew (section 5.4)
- (j) Resolution of Conflicts (section 5.5)
- (k) Test Scheduling (section 5.6)
- (l) Test Execution (section 5.7)
- (m) Data Base/Data Information Systems (section 5.8)
- (n) Reporting Procedures (section 6.0)
- (o) Reports (section 6.1)
- (p) Deficiency Database Management System (section 6.2)
- (q) Flight Test Program Status Reviews (section 6.4)
- (r) General Operating Procedures (section 7.0)
- (s) Ground Operating Procedures (section 7.1)
- (t) Flight Operating Procedures (section 7.2)
- (u) Flight Clearance Process (section 8.0)
- (v) Flight Test Procedures/Safety (section 9.0)
- (w) Navy Access to MDA Subcontractors (section 10.0)
- (x) Mishap Reporting Responsibilities (section 11.0)
- (y) Movement of Test Aircraft (section 12.0)
- (z) Aircrew Training /Qualifications (section 13.0)
- (aa) Flight Test Maintenance Monitoring (section 14.0)
- (ab) Chase Support Requirements (section 15.0)
- (ac) Search and Rescue (section 16.0)
- (ad) Range/Instrumentation Support Requirements (section 17.0)
- (ae) Facilities Support Requirements (section 18.0)
- (af) OPSEC Requirement (section 19.0)

- (ag) Initial Sea Trials (section 20.0)
- (ah) Weapon Systems V&V and Navy Technical Eval (section 21.0)
- (ai) Test and Evaluation Working Group (section 22.0)
- (aj) Role of Operational Test Personnel (section 23.0)
- (ak) MOA Review (section 24.0)

3.0 GROUND RULES The details of this MOA are based on the following ground rules:

(a) The contractor and government will form an integrated EMD test team to include all aspects of the flight test development efforts. The ITT will be responsible for conducting all EMD aircraft ground and flight development tests of the F/A-18E/F aircraft, including TECHEVAL and Verification and Validation (V&V). Further definition of the processes and operations procedures for TECHEVAL and V&V testing at NAWCWD, China Lake, CA will be described in annex B. Team operation will include side-by-side working arrangements of contractor and government personnel in functional areas. The contractor remains responsible for all contractual efforts. Government personnel will be responsible for government unique test requirements and test execution. Contractor or government personnel may be assigned responsible technical positions within the ITT to include lead responsibilities where appropriate. Responsibility for the conduct of the EMD flight test program will rest with the ITT within the constraints of safety, data approvals, flight clearances, test air space availability, and other factors noted in this document or in the contract. The ITT will develop integrated test plans, conduct testing, and report test results in accordance with contractual requirements and as requested by the Program Manager and the F/A-18E/F Integrated Product Team leadership.

(b) The ITT operating procedures described in this MOA are general in nature. Operations at government facilities will be organized and conducted to maintain the objectives of this MOA. Specific processes and operations procedures for EMD testing at the principal test site, NAWCAD, Patuxent River, MD and at NAWCWD, China Lake, CA are described in annexes A and B, respectively.

(c) Approval authority for all contractor/ITT generated test plans and flight test reports shall be in accordance with contract requirements. The Program Manager has the responsibility for all aspects of the F/A-18E/F flight test program. Responsibility and authority for maintaining safe ground and flight operations at Patuxent River, and off-site when NAWCAD personnel are involved rests with COMNAWCAD (5.0). Responsibility and authority for maintaining safe ground and flight operations at China Lake, and off-site when NAWCWD personnel are involved rests with COMNAWCWD (5.0). The relationships and distribution of the responsibilities and authority of the Program Manager, IPT leaders, NAWCAD, NAWCWD, and the ITT for approval of F/A-18E/F test plans, flight test data, and reports are described in this MOA. Detailed discussion of the relationship and distribution of responsibilities and authority for maintaining safe ground and flight operations at



Patuxent River and China Lake are described in annexes A and B, respectively.

(d) The government organization and management structure is the current Naval Aviation System Team structure. The government is organized in Integrated Product Teams (IPTs), populated from a Competency Aligned Organization (CAO), to support the complete life cycle of weapons systems acquisition. The F/A-18 program is organized into three principal program teams to support E/F acquisition and development, Production Systems Development (PSD), and Foreign Military Sales (FMS). The E/F program team is currently further subdivided into three level II IPTs: Air Vehicle, Propulsion, and Mission Systems. The E/F IPTs are populated by personnel from the Competency Aligned Organization (CAO) at NAVAIR and at NAVAIR field activities (NAWCAD and NAWCWD). Level of effort and funding for government personnel assigned to the E/F IPTs will be coordinated and provided by the F/A-18E/F IPT leaders through appropriate Airtask/ Work Unit assignments. The F/A-18E/F ITT is a subset of the larger F/A-18E/F IPT structure and as such will draw personnel resources from the E/F IPT's and the government CAO as required. Funding for government personnel assigned to the ITT will be included in the appropriate E/F IPT Airtask/ Work Unit assignments. The ITT is populated by personnel from the government E/F IPTs and from the contractor Product Definition Teams (PDTs). Personnel are committed 100% to the ITT for the period they are assigned to the ITT. The E/F ITT is defined as the contractor led group of collocated contractor and government test personnel responsible for conducting functional, systems, ground, and flight tests in support of the F/A-18E/F EMD flight test program.

(e) General Electric Aircraft Engines (GEAE) will participate in the ITT pursuant to an Associate Contractor Agreement (ACA) between GEAE and MDA dated 28 September 1992. This ACA, developed pursuant to the F/A-18E/F E&MD Contract Clause H-16, "Associate Contractor Clause" defines the respective responsibilities of MDA and GEAE relative to the integration of the F414 Engine into the F/A-18E/F weapon system.

(f) An Avionics Test Bed (ATB) aircraft is being developed by the F/A-18 program outside of the F/A-18E/F EMD contract. The ATB test asset is controlled by the F/A-18 Program Manager and his IPT leadership and operated by NAWCWD and is designed to support F/A-18 weapon system development. It is anticipated that the ATB will be used to support F/A-18E/F mission systems test efforts.

#### 4.0 ITT MANAGEMENT STRUCTURE

##### 4.1 Definitions

(a) Contractor McDonnell Douglas' Aerospace (MDA), St. Louis, Missouri.

(b) Subcontractor MDA's principal subcontractor, Northrop Grumman Corporation (NGC), Hawthorne, California and other MDA subcontractor's supporting F/A-18E/F EMD.

(c) Government Naval Air Systems Command (NAVAIRSYSCOM), Naval Air Warfare Center Aircraft Division (NAWCAD), Patuxent

River and other government organizations designated by NAVAIRSYSCOM, (i.e., NAWCWD, China Lake), having contributing roles in the integrated test of the F/A-18E/F aircraft.

#### 4.2 Navy/Contractor Roles, Responsibilities, and Authority

(a) Program Manager (PMA-265) Single Navy executive responsible and accountable for all aspects of the F/A-18E/F weapon systems procurement, performance, and support. The Program Manager has broad authority over the planning, direction, control, and utilization of program resources. The Program Manager is responsible for certifying satisfactory contractor compliance with the demonstration and test requirements, approving test plans, test methods and procedures, instrumentation, and data reduction procedures. The Program Manager shall accomplish these tasks through his IPT structure.

(b) Deputy Program Managers (PMA-265F) Program Manager's designated E/F Level I Integrated Program Team (IPT) leaders (Navy 06 and GM-15). The E/F Level I IPT leaders have full delegated responsibility, authority and accountability for all F/A-18E/F matters.

(c) Assistant Program Manager for Systems Engineering (APMSE, (Class Desk)) The F/A-18 Program Senior Competency Specialist for Engineering. The Senior Competency Specialist for Engineering is the chief engineer for the F/A-18 Program. As such, he is responsible for all aspects of engineering as applied across the Hornet Program. While not supplanting the responsibility or authority that IPT leaders have over their respective product areas, the Senior Competency Specialist for Engineering is ultimately responsible for the integrity and veracity of all aspects of engineering conducted throughout the F/A-18 IPTs. The APMSE is responsible for the coordination of the correct integration of engineering efforts across the program. He will ensure that each IPT is adequately staffed with a lead engineer (level II competency specialist for systems engineering) whose responsibility it will be to ensure a systems engineering approach is used throughout the development of individual aspects within the IPT's charter and to keep the APMSE fully informed. The APMSE must maintain clear and open communications with the PMA leadership team and his respective level II Competency Specialists, as well as the rest of the engineers assigned to the program. When matters of technical disagreement arise, the APMSE is the initial point of contact for his level II Competency Specialists as well as a secondary point of contact for other engineers. If agreement cannot be reached between himself and the IPT leaders, the APMSE is encouraged to pursue the matter through the PMA. If there is still lack of agreement, the APMSE will avail himself of the counsel and advice of those in his competency chain of command.

(d) Assistant Program Manager, Logistics (APML) The F/A-18 Program Senior Competency Specialist for Logistics. The Senior Competency Specialist for logistics is the chief logistician for the F/A-18 Program. As such, the APML, is responsible for all aspects of logistics across the Hornet Program. While not

supplanting the responsibility and authority that IPT Leaders have over their respective product areas, the APML is ultimately responsible for the integrity and veracity of all aspects of logistics conducted throughout the F/A-18 IPTs. The APML is responsible for the coordination of the correct integration of logistic efforts across the program. He will ensure that each IPT is adequately staffed with a lead engineer (level II competency specialist for logistics) whose responsibility it will be to ensure a sound logistics approach is used throughout the development of individual aspects within the IPT's charter and to keep the APML fully informed. The APML must maintain clear and open communications with the PMA leadership team and his respective level II Competency Specialists, as well as the rest of the engineers assigned to the program. When matters of technical disagreement arise, the APML is the initial point of contact for his level II Competency Specialists as well as a secondary point of contact for other engineers. If agreement cannot be reached between himself and the IPT leaders, the APML is encouraged to pursue the matter through the PMA. If there is still lack of agreement, the APML will avail himself of the counsel and advice of those in his competency chain of command.

(e) Contractor Flight Test Director (CFTD) The contractor's senior representative on the ITT responsible for the conduct-of the F/A-18E/F flight test program. The CFTD is responsible for the overall management of the ITT organization (contractor and government) and for the successful execution of the ITT controlled F/A-18E/F EMD test effort. The CFTD ensures that ITT test requirement<sup>3</sup> are incorporated into the Master Test Plan and associated Test Work Descriptions (TWDs) and that test results are analyzed to determine compliance with specification and design goals. The CFTD has the authority to approve ITT actions to support the day-to-day execution of the flight test program. The CFTD will have the authority to approve TWDs and TWD amendments for the contractor. The contractor is responsible for initiating required flight clearance requests. The CFTD is responsible for coordinating ITT support of all required flight clearances requests. The CFTD is responsible for coordinating all ITT inputs to required CDRL reports.

(f) Government Flight Test Director (GFTD) The government's senior representative on the ITT. The GFTD is the F/A-18E/F Level I IPT leaders designated representative for coordination, planning, and execution of the F/A-18E/F EMD flight test efforts. The GFTD acts as the central point-of-contact for official government inputs to the ITT. As the government's senior representative to the ITT, the GFTD shall be responsible for ensuring the ITT is comprised of appropriate competency personnel, that government requirements are integrated into the Master Test Plan and Test Work Descriptions (TWDs), and that test results are evaluated by the ITT to support an IPT determination of specification compliance, mission suitability, and readiness for the user. The GFTD will assure that government TWD reviews are complete. The GFTD and the senior 4.11 representative on the ITT will approve TWDS and TWD amendments for the government. The

GFTD, or his designated representative, will assist the contractor in preparing flight clearance requests from the ITT to NAVAIR. The GFTD will utilize the local flight clearance control office to help coordinate ITT flight clearance requests. The GFTD is responsible to the E/F IPT leaders for the safe, efficient, and satisfactory completion of the E/F flight test program. The GFTD has the authority to approve ITT actions to support the day-to-day execution of the flight test program. The GFTD shall be responsible for coordination and scheduling of government support facilities (ranges, data stations, ship scheduling, etc.) and chase/ tanker/ target assets to support the EMD test program. The GFTD has the authority (delegated by the Program Manager through the E/F IPT leadership) to approve independent reports of analysis and findings when required by E/F IPT leadership. (e.g., Test Reports, Quick Response Reports, message reports, deficiency reports) and for reporting recommendations of mission suitability and readiness for OPEVAL to the F/A-18 E/F IPT Level I leaders. This authority does not apply to CDRL reports which will continue to be approved in accordance with the existing contract procedures.

(g) Government Flight Representative (GFR) The GFR is the government representative responsible for surveillance of all contractor flight operations. The GFR approves contractor flights, procedures, and flight crew members qualifications and training, and ensures contractor compliance with applicable provisions of NAVAIRINST 3710.1C. The GFR will coordinate with the ITT as required to ensure that all EMD flights are conducted within approved flight clearance limitations and that contractor aircrew assigned to the ITT are qualified in accordance with applicable instructions. The GFR shall authorize EMD flights with contractor pilots via a signed, Request for Flight Approval of Bailed, Loaned and GFP Aircraft, Form 99. EMD flights with government pilots will be authorized by the DPRO (Flight Operations Officer) for EMD flights in St. Louis. EMD flights with government pilots at NAWC sites will be authorized by the cognizant NAWC test activity via the signed flight schedule.

4.34 ITT Management Interfaces The CFTD is the ITT Test Director. The CFTD reports directly to the contractor's Vice President and General Manager for F/A-18E/F. The GFTD will assist the CFTD and is primarily responsible for coordinating the government efforts required to support the ITT. The GFTD reports directly to the F/A-18E/F Level I IPT leaders. An organizational chart depicting the ITT direct interface for program execution is shown in figure 1. The ITT (CFTD/ GFTD) has responsibility, authority, and accountability for the execution of the flight test program. Figure 1 also depicts the ITT interface with the contractor's management and technical organization for contract execution and with the government test activity for technical and safety oversight. The bi-directional arrow between the ITT and contract execution path depicts the technical link between the ITT and contractor engineering at the contractor's plant. This two way path represents both the fact that the ITT will be populated by

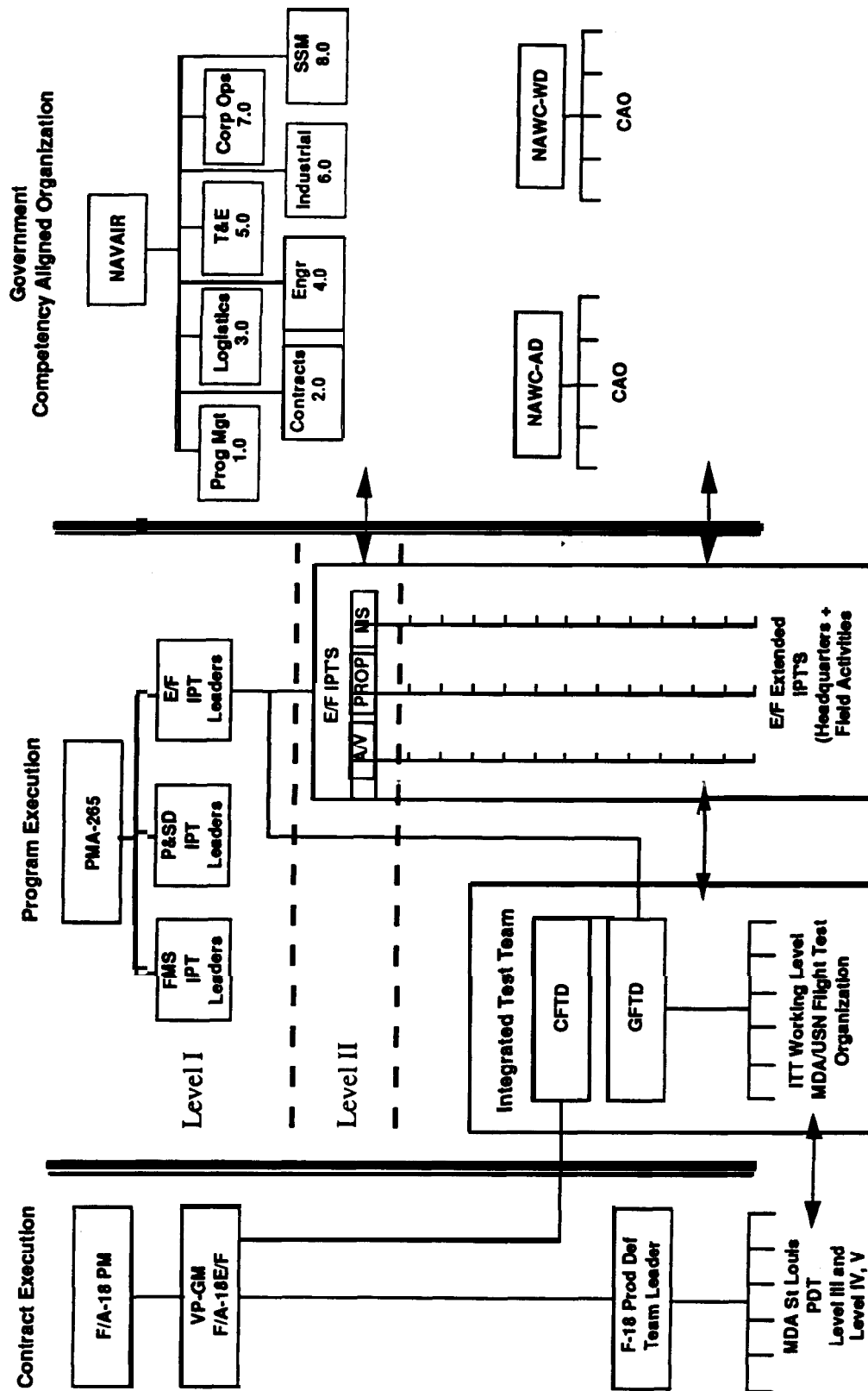


Figure 1: F/A-18E/F IPT / ITT Interface

personnel from the contractor's engineering disciplines (Product Definition Teams (PDT's)) and that an important part of the supporting analysis of flight test results will continue to take place at the contractor's plant (by the PDT's). The bi-directional arrows between the ITT/IPT and government Competency Aligned Organization (CAO) depicts the link between the ITT, the E/F IPT's and the government CAO. Government personnel mapped to the E/F IPT's will be drawn from the CAO. Personnel assigned to the ITT will be drawn from the E/F IPT and function within the ITT under the direction of appropriate ITT personnel (i.e. ITT members will be assigned by the ITT to perform ITT directed tasks required to support the E/F flight test program). Government personnel assigned to the ITT will be responsible for coordination with the E/F IPTs to ensure that tests are technically sound, efficiently planned, and safely conducted. Government personnel assigned to the ITT will also be responsible for coordination with the E/F IPTs for any government analysis of test results. Government personnel assigned to the ITT will be responsible to the CAO for adhering to approved CAO processes. Figure 1 does not depict all of the lines of communication necessary to conduct the EMD flight test activity. In particular, it is essential that strong technical communication paths between the E/F IPTs, the contractor's PDTs and key government CAO personnel (e.g. flight clearance officer (AIR-4.3P)) be maintained.

4.4 Integrated Test Team The ITT is comprised of members from both the contractor and government. This shall include side-by-side working arrangements in functional areas of aircraft developmental test. The contractor led (CFTD) ITT will be responsible for the conduct of the development flight test program. Contractor members of the ITT and contractor E/F PDTs will support the CFTD in preparing and approving TWDs and assuring planned testing is conducted safely and efficiently. The contractor ITT members will be responsible for coordinating with contractor PDTs at the contractor's facility to ensure that flight test data satisfies the demonstration requirements. The contractor remains accountable for all contractual efforts. The GFTD will be the primary interface between the contractor and the government at the applicable test site. The government members of the ITT are primarily responsible for identifying and incorporating government unique requirements into the Master Test Plan and TWDs. Government members of the ITT and E/F IPT will support the GFTD in preparing and approving TWDs and assuring planned testing is conducted safely and efficiently. Government members of the ITT will review ITT generated data for adequacy, evaluate and analyze data to support flight test, assess mission effectiveness, and ensure that government management is informed on program status and issues. Members of the ITT will witness formal demonstration tests as required. Government and contractor pilots shall participate in all phases of the EMD flight test program. ITT personnel changes will be held to a minimum to provide a continuity of effort. When changes do occur, the ITT will make every effort to ensure an adequate overlap of personnel.

If during the EMD flight test program, replacement of ITT flight crew personnel is required, every effort will be made for a minimum of one month overlap to ensure an orderly and complete transition.

## 5.0 CONCEPT OF OPERATIONS FOR INTEGRATED TEST TEAMS

5.1 Test Requirements Flowdown Contractor flight test requirements are identified in the contractor's Master Test Plan (C00D) which is developed from the demonstration requirements specified in Addendum 131 to MIL-D-8708B (AS). Addendum 131 is derived by tailoring the basic MIL-D-8708B (AS) to the requirements contained in the F/A-18E/F Detailed Specification. The Master Test Plan also includes requirements (MEI, Data Collection, etc.) derived from the Integrated Logistic Support Detail Specification (ILS-DS-30A-252). Government requirements (e.g. derived from the Test and Evaluation Master Plan (TEMP)) which address mission suitability that are not specified in Addendum 131 to MIL-D-8708B will be identified and incorporated into the contractor's Master Test Plan. The contractor's plan, with government requirements incorporated, will become the single Master Test Plan (MTP) for the ITT. More specific description of tests will be addressed in contractor/ government prepared Test Work Descriptions (TWDs).

5.2 Test Plan Generation, Approval, and Amendment The ITT will follow the Master Test Plan (MTP) (CDRL C00D) for development testing of the EMD aircraft. TWDs will be prepared following the contractor's Test Work Description (TWD) format. TWDs will be prepared in accordance with the contractor's Flight Test Operating Directive (F001.4) and Engineering Standard Practice (ESP 8.761). Test conditions and methods will be consolidated to maximize the efficiency of EMD flight testing. TWDs will include background information to describe the rationale and purpose for the tests, description of the method of tests, scope of tests, test matrices, success criteria, go/no go criteria, safety precautions, identification of risk associated with the tests, risk mitigation plan, instrumentation and data requirements for analysis, programming of onboard instrumentation systems, Real-time Telemetry Processing System (RTPS) requirements, and report requirements. IPT and ITT government and contractor points of contact (POC's) will be identified for each TWD. The POC's will be responsible for ensuring that the TWDs are complete and will facilitate the TWD review process. TWDs will be initiated in draft form which will be reviewed and developed in a systematic approach (draft, draft review, final draft, final draft approval). The final draft will be reviewed and initialed by the points of contact listed on the TWD cover sheet. A concurrence sheet will be attached which will be signed by the originator, applicable Technology/ Product Definition Team Leaders, the Aircraft Test and Data Team Leader, the Data Production Team Leader, Product Safety Team Leader, Flight Operations Team Leader ITT Technical Support Team Leader, ITT Aircraft Test and Data Team Leader, NAWCAD 4.11

Designated Representative, GFTD, and the CFTD. The CFTD has final approval authority for TWDs and TWD amendments.

### 5.3 Test Card Creation, Procedures, Approval

(a) The ITT Aircraft Test and Data Team will be responsible for writing the flight cards utilizing the conditions and procedures specified in the approved TWDs. The ITT Aircraft Test and Data Team engineers will work with contractor and government ITT Technical Support Team engineers to ensure tests are planned and executed with the goal of minimizing the need for repeating government data points through independent tests. Test cards will be reviewed and signed by the Test Conductor, assigned Test Pilot, ITT Flight Operations Team Leader (or designee), and Aircraft Test and Data Team Leader.

(b) The Test Conductors must work with the responsible ITT Technical Support Team engineers to know the status (acceptability) of past testing. A test point tracking system will be implemented. This system will be implemented and maintained by the ITT and will assist in the test planning process in determining what future tests are needed to meet demonstration requirements.

5.4 Selection and Approval of Aircrew Contractor flight crew will be designated and assigned to the ITT by the contractor. Contractor pilots will be qualified in accordance with MDA Flight Operations Procedures (MDA Report 9271, Revision aj, dated 31 Mar 1995) and GFR approved contractor procedures. Additionally, contractor pilots will be required to complete NAWC Ordnance qualification training prior to being approved to perform weapons separation or captive carriage tests. Only pilots certified by the Commanding Officer, Naval Strike Aircraft Test Squadron will be permitted to participate in weapons carriage and /or separation testing. Government aircrew from NAWCAD will be designated and assigned to the ITT by the Commander, Naval Test Wing Atlantic or his designated representative, Commanding Officer, Naval Strike Aircraft Test Squadron. Government aircrew from NAWCWD will be designated and assigned by the Commander, Naval Test Wing Pacific or his designated representative, Commanding Officer, Weapons Test Squadron China Lake. The ITT is responsible for ensuring that all ITT pilots are qualified for the specific flight test mission to which they are assigned. Both government and contractor pilots shall participate in all phases of the EMD flight test program. Flight tests to satisfy formal demonstration requirements may be flown by either contractor or government pilots. The ITT will be responsible for distribution of flights between contractor/government flight crews. Crew selection will be made by the ITT Flight Operations Team Leader or designee from both contractor and government personnel assigned to the ITT depending on the test requirements, pilot skills, and background knowledge. Disputes on aircrew assignments will be adjudicated by the CFTD and GFTD.



**5.5 Resolution of Conflict** It is anticipated that during the course of the EMD flight test program, conflicts related to organizational responsibilities (safety, personnel, facilities, etc.) and disagreements between members of the ITT on the conduct of the flight test program will occur. In all cases where there are disagreements, ITT members will make every effort to resolve conflicts within the ITT. Issues/ conflicts shall be worked "horizontally" before working "vertically". ITT team members will avail themselves of the counsel and advice of those in their competency to help resolve issues in a horizontal vice vertical fashion. Every effort will be made to notify the CFTD and GFTD prior to bringing an issue outside of the ITT. If the CFTD and GFTD are unable to satisfactorily resolve an issue, they are responsible for elevating the issue for resolution within their respective IPT/ PDT leadership structure. Conflicts which may arise relative to the EMD program technical execution, contract requirements, or program funding shall be referred to E/F IPT leadership for resolution. If agreement cannot be reached with IPT leadership, then the GFTD/ CFTD will avail themselves of the counsel and advice of those in the appropriate competency or contractor chain of command. Both the Government and the Contractor remain responsible in all personnel matters for their own respective employees. Neither shall be deemed agents or employees of the other and all responsibility including liability for pay and benefits and liability for health, safety, and welfare shall remain the responsibility of the conveying party.

## **5.6 Test Scheduling**

(a) To ensure proper coordination, scheduling, and lead time of personnel and facilities, there will be long-term planning schedules and short-term flight/range/facility plans. A strategic approach to planning flight tests will be used with a responsible flight test engineer involved in the process. Long-range tiered schedules (90 day look ahead) will be translated into waterfall schedules depicting test flights interleaved with ground activity. Draft mission plans will evolve from the waterfall schedules to produce a weekly flight test plan. The weekly mission plans will be coordinated with the responsible flight test and design and technology engineers at a weekly vehicle planning group meeting. The agreed to weekly mission plans will then be translated into flight test cards for individual flights by the assigned Test Conductor. The mission plans will be adjusted as necessary through the daily schedules.

(b) The 30 day look ahead plan will be issued by the CFTD to the GFTD who will be responsible for coordinating the required Navy range/ facility/ aircraft.

(c) All F/A-18E/F test operations scheduling will be made through the F/A-18E/F ITT flight scheduler. The ITT flight scheduler will be responsible for coordinating all of the supporting assets and facilities required to support the test mission with the test site scheduling procedures. All flight test events must be GFR approved, scheduled, and authorized via the

local test site flight schedule in accordance with local test site procedures.

(d) Shipboard scheduling operations will be coordinated by the GFTD.

(e) All ordnance scheduling for ground, captive or separation testing will be in accordance with test site procedures.

#### 5.7 Test Execution

(a) Tests requirements will be identified in appropriate The ITT will use the contractor's Flight Test Operating Directive (FTOD, F001.12) as a guide for procedures to be followed during test missions. The FTOD provides basic guidelines on mission conduct, identifies key personnel, and outlines mission briefing, conduct, and debriefing requirements.

(b) All testing will be accomplished in accordance with an approved TWD and within approved flight clearances. The CFTD will designate a qualified Test Conductor who has responsibility for test conduct in accordance with the TWD and flight clearance. The government will designate government engineers qualified as test conductors. Final approval for a government test conductor rests with the CFTD.

(c) The Test Conductor is responsible for all engineering, support, and safety aspects of the mission.

(d) Responsible ITT (Aircraft Test and Data Team and Technical Support Team engineers) are responsible for the technical adequacy of the particular engineering discipline being tested through TWD preparation, test card preparation, test execution, test monitoring, and communicating test progress to the Test Conductor.

(e) The mission pilot is responsible for the safe operation of the test aircraft, successful maneuvers, and on-aircraft activities to meet mission objectives.

#### 5.8 Data Base/Data Information Systems

(a) The contractor is responsible for data reduction and final data format. Data products to support specific testing (e.g., weapon separation tests) must be specified in the appropriate TWD. Data processing/analysis/model correlation techniques will be specified in appropriate TWDs. Post-flight data processing, analysis, and model correlation will normally be performed by the contractor at the contractor's home facility. However, when practicable, data processing/analysis/model correlation may be conducted at the test site by the ITT. All EMD engineering flight test data products will be available to the ITT. Results of the contractor's analyses will be made available to all members of the ITT.

(b) Data required to satisfy Addendum 131 Demonstration Requirements and additional ITT requirements will be included in a common data base/information system. The flight test data base will be accessible at the primary test location to allow evaluation of the flight test data by members of the ITT. The

data system and processing requirements will be as defined in Addendum 131.

(c) The flight test data base shall be managed by the contractor. In general, the data base will consist primarily of requested time slices processed from the onboard tape. Telemetered data may also be available on request. Data sets may be merged to eliminate duplicate data from these two sources. Data will be archived and readily retrievable. Data from historical files will be available on request. All members of the ITT will have access to the flight test data base.

(d) The contractor will be responsible for data acquisition, processing, and analysis requirements. The government will be responsible for coordinating required telemetry ground station support to support data acquisition, processing and analysis requirements.

(e) ITT government personnel will have access to additional contractor engineering data bases used in F/A-10 development/lessons learned. Access to additional contractor data bases will be coordinated between the ITT and MDA Product Definition Team.

(f) All maintenance performed by the contractor will be documented in accordance with the Naval Aviation Maintenance Program (NAMP) OPNAVINST 4790.2 Series. The MDA Closed Loop Evaluation and Reporting (CLEAR) system source documents will be used in lieu of the Visual Information Display/Maintenance Action Form (VIDS/MAF) to collect all scheduled and unscheduled on and off repairs and all vendor reported component repair actions for Contractor Furnished Assets (CFA). The contractor shall collect and combine all appropriate CLEAR form data into the Aircraft Fault Reporting System (AFRS) data base. Government Furnished Assets (GFA) will also be entered into AFRS if data is supplied by the Navy when a component is returned to the vendor or depot for repair. The AFRS data base is compatible with both Navy and contractor Reliability Maintainability and Logistics data bases.

(g) Logistic Support Analysis (LSA) data will be generated, recorded, approved, and revised in accordance with the Integrated Logistic Support Detail Specification (ILS-DS-30A-252) and the contractor's approved Contractor Data Collection plan.

(h) Data gathered during ITT testing shall be used to satisfy both contractor and government test requirements. Data gathered during ITT testing shall be used to satisfy formal contract demonstration test requirements.

(i) The baseline instrumentation requirements for each of the E/F EMD aircraft are defined by Design Decision Memoranda (DDM). These requirements are included in the Flight Test Instrumentation Report submitted by the contractor to NAVAIRSYSCOM. Any changes/alterations in the instrumentation requirements will be proposed, reviewed, and approved by the Program Manager or his designated E/F IPT representative. The ITT shall define the specific instrumentation requirements for each test through the appropriate TWDs.

(j) The ITT will be responsible for identifying the requirements for visual records (technical and public relations) to support the EMD Program. Copies of all visual records made in

support of the E/F shall be available to all members of the ITT. All original film (motion or stills and negatives) and video used in the documentation of weapons compatibility, carriage, or separation testing will be provided to, and maintained by, the NAWCAD Ordnance Support Team Technical Data Information Center. Support for taking and processing of visual records may be requested from local base facilities through the GFTD. Audiovisual and photographic processing support will be in accordance with the applicable site Host Tenant Agreement. Airborne photography may be planned and scheduled using chase aircraft. Airborne photographers must meet aircrew qualifications for the aircraft in which they are scheduled to fly.

(k) The ITT will not release any photographs or make public information on the F/A-18E/F without prior F/A-18 Program Office (PMA-265) approval. PMA-265 will coordinate additional approval from NAVAIRSYSCOM PAO and ASN as required. The local NAS Public Affairs Office shall coordinate release of any photographs or public information on the E/F program with F/A-18E/F IPT PAO.

## 6.0 REPORTING PROCEDURES

6.1 Reports Reports will be issued as stipulated in each TWD or as required by the contract. Test reports will be coordinated through the ITT. The CFTD will approve the ITT input for reports required to meet TWD and/or contract requirements. Final reports required to meet CDRL requirements will be submitted and approved in accordance with the contract. The GFTD may submit independent reports of analysis and findings to F/A-18E/F IPT's when deemed appropriate, or as required by E/F IPT leadership. (e.g., Test Reports, Quick Response Reports, message reports). The GFTD shall provide a copy of any independent reports to the CFTD.

(a) Flight Test Reports ITT aircrew will provide comments to the Test Conductor, who will prepare the flight test report summarizing the results of each test flight. Flight test reports will be prepared using inter-site communications and reporting procedures (e.g., electronic mail, faxed messages, standard mail distribution). The flight test reports will serve as the single source of reporting test results from ITT flight crews. Original flight test reports will be maintained by the ITT. Copies of the flight test reports will be provided to E/F IPT and contractor PDT personnel upon request.

(b) Technical Reports Technical reports will be issued as stipulated in each test plan and per addendum 697 to SD-8706C and addendum 131 to MIL-D-8708B (AS). Technical reports will be coordinated through the ITT. Approval of technical reports generated by the ITT rests with the CFTD. The ITT will support the preparation of technical reports required by the contract. Approval of reports submitted to satisfy CDRL requirements will be in accordance with the contract. The GFTD may submit independent reports of analysis and findings (e.g., Test Reports, Quick Response Reports, message reports) to the F/A-18E/F IPTs when deemed appropriate, or as required by IPT leadership. ITT

generated independent reports will be reviewed and disseminated by the GFTD.

(c) Deficiency Reports The ITT will implement a systematic approach to identify potential problems, document anomalies and discrepancies in systems that are still under development, and report and update status of deficiencies. There will be free exchange of information regarding deficiencies and discrepancies within the ITT. The ITT will track anomalies, discrepancies, and deficiencies in the following manner:

(1) The Navy will be observing contractor work-in-progress and the contractor may have discrepancies for which corrections have not been identified, as well as discrepancies for which fixes are under development. Anomalies or discrepancies observed by any ITT member will be documented as a Watch Item for initial screening by the ITT.

(2) Watch Items will be tracked by the ITT and reviewed periodically (approximately weekly) by the ITT leadership team. Watch Items which are found unresolved by the ITT leadership team will be assigned as White Sheets by the CFTD and GFTD.

(3) Outstanding White Sheets will be reviewed by the DRRB. The DRRB will convene as appropriate to the pace of operations (at a minimum, monthly) to review outstanding White Sheets. If a White Sheet remains unresolved, the DRRB will assign the White Sheet as a formal Deficiency Report.

(4) Software anomalies will be reported via the existing software documentation process (ALERT/SAR/STR). The ALERT/SAR/STR process will support the Watch Item/ White Sheet/ Deficiency Report process as necessary to ensure timely identification of deficiencies.

6.2 Deficiency Database Management System The ITT will utilize the Deficiency Database Management System (DDMS) to track Watch Item, White Sheet, and Deficiency Report status. Electronic transfer of data will be limited to unclassified data only. A separate stand-alone system will be used for classified deficiency reports. A paper copy of classified deficiency reports will be maintained. Information in the F/A-18E/F DDMS will be available to members of the Board of Inspection and Survey (BIS).

6.3 Deficiencies Report Review Board (DRRB) A Deficiency Report Review Board (DRRB) will be established for EMD flight test to support the Flight Test Program Status Review (FTPSR) process. The DRRB will be responsible for evaluating aircraft discrepancies by reviewing watch items, assigning white sheets, and recommending which white sheets should be formalized as deficiency reports. The DRRB will be chaired by the GFTD. ITT Flight Operations Team (pilots), ITT Technical Support Team (technology engineers), ITT Aircraft Test and Data Team (flight test engineers), ITT Supportability Team (R&M specialists, ILS specialists), ITT Safety Team engineers, a BIS representative, and the CO, Strike Aircraft Test Squadron (acting in his ADDU capacity) will be included on the DRRB. The DRRB will be the central forum for the compilation and assessment of White Sheets and assignment of White Sheets as

Deficiency Reports. The DRRB will evaluate and recommend resolution priority for all hardware and software discrepancies that affect flight test aircraft. The DRRB will update White Sheet and Deficiency Report status to support the FTPSR. Upon completion of a review, the GFTD will submit a letter to the E/F IPT leadership on White Sheet and Deficiency Report concerns. A copy of the GFTD letter will be provided to the CFTD.

6.4 Flight Test Program Status Review In accordance with Addendum 131 to MIL-D-8708, periodic (approximately yearly) Flight Test Program Status Reviews (FTPSR) will be held to assess the technical progress of the developmental flight test program. The FTPSR will be chaired by the Program Manager or his designated representative.

7.0 GENERAL OPERATING PROCEDURES ITT ground and flight operations will be conducted within the guidelines established within the current version of OPNAVINST 3710, NAVAIRINST 3710, GFR approved contractor procedures and applicable test site NAWC Instructions.

7.1 Ground Operating Procedures

(a) ITT personnel performing non-flight functions in/on the EMD aircraft must meet applicable qualifications, be fully briefed and checked-out by qualified personnel, and have prior approval from the ITT aircraft Test Conductors. The contractor will implement and document a weapons handling certification program for all contractor personnel involved in weapons handling, transportation, and loading.

(b) The contractor is responsible for the maintenance of the EMU aircraft. All ITT maintenance activities and documentation will be conducted in accordance with GFR approved contractor maintenance procedures. ITT aircraft maintenance will be conducted such that a single consolidated method for maintenance documentation exists.

(c) Maintenance and servicing of Common Support Equipment (CSE) shall be accomplished in accordance with the approved Host Tenant Agreements between the contractor and the applicable NAWC test site.

(d) During all ground operating events, non-participating ITT personnel will have access to monitor operations on a not-to-interfere basis with the concurrence of the responsible ITT Test Conductor.

(e) F/A-18E/F aircraft refueling will be conducted in accordance with applicable test site instructions.

7.2 Flight Operations Procedures

(a) Prior to the conduct of any contractor piloted flight, the on-site GFR will ensure that the planned flight profile is in compliance with the current NAVAIRSYSCOM flight clearance. No contractor piloted EMD flights will be flown without an approved Form 99.

(b) ITT flight crews must meet the aircrew qualifications requirements established in pertinent NAWC instructions contractor established requirements. Currency requirements for contractor pilots are specified in NAVAIR 3710.1C. Currency requirements for government pilots are specified in applicable NAWC instructions.

8.0 FLIGHT CLEARANCE PROCESS An authorized flight clearance will be required for all EMD flights. Flight clearance requests will be initiated by the F/A-18E/F team in accordance with NAVAIRINST 13034.1A. The F/A-18E/F IPTs, ITT, and contractor PDTs will provide the required engineering support to the NAVAIRSYSCOM flight clearance control officer to prepare and coordinate the flight clearance request and to facilitate the flight clearance process. The flight clearance control officer will act as a member of the E/F IPT for all matters related to the development of the E/F flight clearance process but will retain independent approval authority. The F/A-18E/F IPT consists of members who have been delegated the responsibility and authority to approve the flight clearance request when it is submitted to NAVAIRSYSCOM. These empowered individuals are the cornerstones of the technical conscience to the flight clearance process. They must continually work towards the correct balance between technically correct solutions and programmatic pressures. The risk mitigation to this approach is dependent on open, honest, and high volume communication with the competency "greyheads" and managers to ensure that the empowered IPT members have the right training and experience to perform the flight clearance function. When the flight clearance request is approved, flight clearance authorization will be provided by NAVAIRSYSCOM (AIR 4.3P) in accordance with paragraph 3.1.5 of Addendum 131 to MIL-D-8708B. A single flight clearance will be provided which is applicable for both contractor and government ITT aircrew. NAVAIRSYSCOM (AIR 4.3P) may delegate or provide an empowered 4.3 flight clearance representative at NAWCAD, Patuxent River or NAWCWD, China Lake to provide flight clearance support in specific technical areas. Some of the specific technical areas include: flight test instrumentation, flight test cameras, non-standard aircraft configuration (physical or electrical), non-standard weapon configuration (physical or electrical), limited software modification not to effect safety of flight or weapon separation characteristics, and mission computer software (OFP). In those technical areas where NAVAIR delegates or provides an empowered flight clearance representative to NAWCAD or NAWCWD, the ITT will coordinate flight clearance requests through the appropriate NAWC flight clearance office.

9.0 FLIGHTS/TEST PROCEDURE SAFETY The ITT will adhere to the contractor's / government (operating site) approved procedures for flight test and safety. The responsibility for safe test operations is shared equally by all ITT participants. Any ITT person directly involved in test conduct may call "knock it off" for safety reasons during the conduct of a flight. Other safety

concerns or issues shall be adjudicated within the ITT as described in the 5.5 Resolution of Conflicts section.

10.0 NAVY ACCESS TO MDA SUBCONTRACTORS Procedures for communications between Navy personnel and MDA subcontractors will be defined by the contractor. Communication will be coordinated by a MDA representative equivalent in working level, where appropriate, to the Navy person initiating the contact.

11.0 MISHAP REPORTING RESPONSIBILITIES NAVAIR (AIR-8.0H) has mishap reporting responsibility for the EMD aircraft. As such NAVAIR (AIR-8.0H) will convene and appoint the Aircraft Mishap Board (AMB). For EMD operations at the contractor's facility, the on-site GFR will initiate mishap reporting in accordance with the existing Aircraft Mishap Reporting and Investigation plan between the DPRO McDonnell Douglas St. Louis and McDonnell Douglas Aerospace. The GFR will retain mishap reporting responsibility until relieved by the NAVAIR appointed AMB. For EMD operations at NAWC sites, the on-site GFR will coordinate with the cognizant NAWC squadron and initiate mishap reporting in accordance with the approved NAWC squadron pre-mishap plan. The NAWC squadron will convene its standing Aircraft Mishap Board (AMB) and retain mishap reporting responsibility until relieved by the NAVAIR appointed AMB.

12.0 MOVEMENT OF TEST AIRCRAFT The EMD aircraft will be expeditiously transferred from the contractor's plant to the designated principal test site, the Naval Air Warfare Center, Aircraft Division, Patuxent River, MD for the EMD flight test program. At specified times during the EMD flight test program, EMD aircraft will be deployed to other government test sites (e.g., Edwards AFB, CA, for crosswind landings and NAWCWD for weapon system V&V/TECHEVAL testing) to support the overall objectives of the EMD test program. The GFTD will be responsible for all coordination with other government facilities required to support the EMD flight test effort.

13.0 AIRCREW TRAINING/QUALIFICATIONS The contractor will provide ITT training covering F/A-18E/F familiarization/operation (including ground, flight, and manned flight simulation). The applicable NAWC test activity (NAWCAD or NAWCWD) will provide training in test area and local operation procedures prior to commencement of flying. Within the scope of the contractually defined training courses, ITT engineering personnel will be included in F/A-18E/F pilot training courses. Government test aircrew shall be fully qualified and certified in appropriate Test Category (Category D) per NAWC instructions.

14.0 FLIGHT TEST MAINTENANCE MONITORING The ITT will include Reliability and Maintainability monitoring and Supportability evaluation specialists (RM&S). ITT RM&S specialists will have access to monitor scheduled and unscheduled maintenance being performed on the test aircraft including pre- and post-flight



briefings as necessary. Documentation of maintenance activity on the test aircraft will be in accordance with the Naval Aviation Maintenance Program (NAMP) OPNAVINST 4790.2 Series. However, the MDA Closed Loop Evaluation and Reporting (CLEAR) system source documents will be used in lieu of the Visual Information Display/Maintenance Action Form (VIDS/MAF) to collect all scheduled and unscheduled on and off equipment maintenance data. The ITT will support a joint contractor and Navy Reliability and Maintainability Review Board which will determine the relevancy of the maintenance actions, failures, maintenance man-hours expended and BIT indications in accordance with the demonstration requirements (Addendum 131 to MIL-D-8708B, Appendix C).

15.0 CHASE SUPPORT REQUIREMENTS NAWC will provide chase aircraft support for F/A-18E/F flight operations at government test sites. The contractor will provide chase aircraft support for operations at contractor test sites. Qualified contractor and government pilots will serve as chase aircraft crews. Contractor pilots may be permitted to fly as pilot in command in NAWC controlled chase aircraft in accordance with applicable NAWC instructions.

16.0 SEARCH AND RESCUE Search and Rescue (SAR) will be available in all test areas to support ITT flight operations. SAR will be provided by the government as specified in the appropriate Host Tenant Agreements.

17.0 RANGE/INSTRUMENTATION SUPPORT REQUIREMENTS NAWC will provide range and instrumentation support for operations at Patuxent River and China Lake. Government instrumentation personnel will be assigned to the ITT to support the installed flight test instrumentation system and provide the necessary coordination between the ITT and government range facilities (RTPS, Chesapeake Test Range (CTR), Special Flight Test Instrumentation (SFTI) pool, Calibration Lab, etc.). Government instrumentation personnel will ensure that the Flight Test Instrumentation (FTI) installation meets the requirements of addendum 131 to MIL-D-8708B (AS). NAWCAD Test Article Preparation (NAWCAD 5.4) and NAWCAD flight clearance office personnel will provide support for flight clearance of the installed FTI system including any modifications required during the flight test program.

18.0 FACILITIES SUPPORT REQUIREMENTS Facility support requirements to support the ITT will be negotiated in separate Host Tenant Agreements between the contractor and the government. Separate HTAs will be required for Patuxent River and China Lake.

19.0 OPSEC REQUIREMENTS The contractor will be responsible for providing OPSEC protection for all classified and sensitive information, and unclassified technical data developed during the EMD flight test program. The contractor shall implement and maintain an approved OPSEC Program in accordance with Section C, Item 0012 of Contract N00019-92-C-0059.

20.0 INITIAL SEA TRIALS An Initial Sea Trials (IST) test period is included in the EMD test schedule. The Program Manager's T&E coordinator (PMA-265T) is responsible for coordinating with the appropriate TYCOM (East or West Coast) to get a commitment of a ship to support IST. During IST, the ITT will be responsible for the planning and execution of the flight test effort. Test planning and test execution will follow the same procedures as other ITT testing. The GFTD, working with the Ship Suitability members of the ITT and the NAWCAD Carrier Landing Support Team, will be responsible for coordinating carrier scheduling operations. The contractor will continue to provide maintenance, engineering, and data support. Contractor pilots will be permitted to participate during the shore based buildup flights. Only qualified pilots approved by the Program Manager or his designated representative will be permitted to participate during shipboard tests.

#### 21.0 WEAPON SYSTEMS VERIFICATION AND VALIDATION (V&V) AND NAVY TECHNICAL EVALUATION

21.1 Weapons Systems Verification and Validation A Navy led Weapon Systems Verification and Validation (V&V) test period is planned during the EMD flight test program. Test planning and test execution will follow the procedures as described in Annex B. The contractor will be expected to continue maintenance and technical support as required to support the V&V.

21.2 Navy Technical Evaluation A dedicated Navy Technical Evaluation (TECHEVAL) is planned at the end of the EMD test period. The ITT will remain intact to conduct and support the TECHEVAL. The Program Manager's T&E coordinator (PMA-265T) is responsible for coordinating with the appropriate TYCOM (East or West Coast) to get a commitment of a ship to support TECHEVAL. Test planning and test execution will follow the same procedures as other ITT testing except that during the TECHEVAL, the GFTD will be responsible to coordinate and prepare the TECHEVAL test plan, request flight clearance, and direct the TECHEVAL flight test effort. Shipboard scheduling to support the TECHEVAL will be coordinated by the GFTD. The contractor will be expected to continue maintenance, engineering, data, and technical support as required to support the TECHEVAL.

22.0 TEST AND EVALUATION WORKING GROUP The current Test and Evaluation Working Group will continue throughout EMD to address plans, alternatives, progress, and technical problems directly associated with Test and Evaluation of the F/A-18E/F. The Test and Evaluation Working Group will interface with the Navy Test and Evaluation Working Group (NTEWG) to help incorporate operational requirements into the EMD planning and testing process to facilitate successful Operational Testing (OT) (OTIIA, OTIIB, and OTIIC (OPEVAL)).

23.0 ROLE OF OPERATIONAL TEST PERSONNEL Operational Test (OT) personnel may participate in the ITT under the guidelines of this MOA. The scope and objectives of OT participation will be coordinated with the ITT through the GFTD.

24.0 MOA REVIEW At a minimum, this MOA will be reviewed annually, and will be updated as required.

25 August 1995

MEMORANDUM OF AGREEMENT  
F/A-18E/F ENGINEERING AND MANUFACTURING DEVELOPMENT  
INTEGRATED TEST TEAM  
BETWEEN  
MCDONNELL DOUGLAS AEROSPACE  
AND  
F/A-18E/F PROGRAM MANAGER  
ANNEX A  
OPERATIONS  
AT  
NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION  
PATUXENT RIVER, MD

APPROVED BY:

*R.A. Dudderar*  
R.A. Dudderar  
Captain, U.S. Navy  
Head, Test and Evaluation Group (5.0)  
Naval Air Warfare Center Aircraft Division

*9/8/95*  
Date

*F.C. Raley*  
F.C. Raley  
Head, T&E Engineering (4.11)

*9/4/95*  
Date

ANNEX A  
OPERATIONS  
AT  
NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION  
PATUXENT RIVER, MD

1.0 INTRODUCTION The top level MOA discusses the responsibilities, relationships, and procedures for the conduct of the F/A-18E/F EMD flight test program. The purpose of this annex is to augment the top level MOA and provide more specific definition of the relationships between the F/A-18E/F Program Manager, the F/A-18E/F IPT, ITT, and NAWCAD, Patuxent River required to support the F/A-18E/F EMD flight test program at Patuxent River.

2.0 NAWCAD ROLES, AND RESPONSIBILITIES, AND AUTHORITY An organization chart for NAWCAD is shown in figure A-1. Definition of the roles, responsibilities and authority, and the relationship of key NAWCAD and key F/A-18E/F program personnel (IPT and ITT) are defined below.

(a) Commander, Naval Air Warfare Aircraft Division Navy executive responsible for all of the assets, personnel, and facilities of NAWCAD.

(b) Commander, Test and Evaluation Group (NAWCAD 5.0) Responsible for the processes and facilities required to support the planning, conduct, monitoring, and reporting of tests for the development, production, evaluation, and fielding of air warfare systems, subsystems, and support systems. The Commander, Test and Evaluation Group has responsibility for the test facilities, aircraft/ weapons instrumentation, and Aircraft Reporting Custodian activities including operations, maintenance, and aviation safety for aircraft assigned at Patuxent River.

(c) Commander, Naval Test Wing Atlantic (5.5) Responsible for the care and operations of all test aircraft assigned to Patuxent River. As the reporting custodian of all assigned aircraft to Naval Test Wing Atlantic, the Test Wing Commander is responsible for the final approval of all activity using those aircraft. The Test Wing Commander is responsible for developing the common practices, processes and policies for governing the operations, maintenance and safety of all installed system testing on the aircraft in custody, as well as oversight/ approval of all Test Wing aircrew in tests conducted by other services or contractor flight establishments. The Test Wing Commander will also provide oversight on resident contractor flight operations at Patuxent River.

# NAWCAD CAO

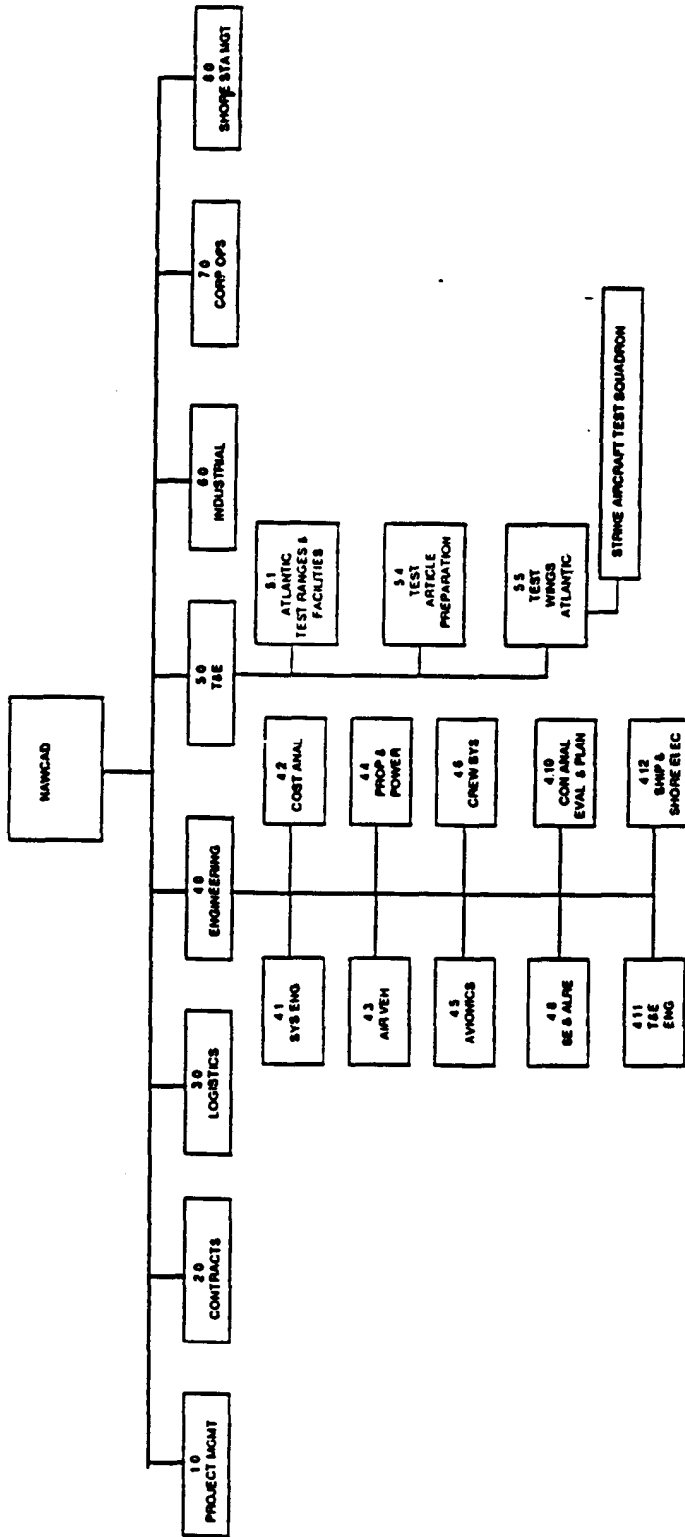


Figure A-1: NAWCAD CAO

(d) Commanding Officer (CO), Naval Strike Aircraft Test Squadron The Commanding Officer (CO) Naval Strike Aircraft Test Squadron is responsible for flight operations (maintenance, operations, and safety) and for participation in the processes of flight test planning, execution, and reporting of test results when utilizing assets under the operational control of Naval Strike Aircraft Test Squadron. For the F/A-18E/F ITT, this primarily applies to NAWCAD provided chase assets. However, CO, Naval Strike Aircraft Test Squadron is also delegated (from Commander, Test Wing Atlantic) responsibility for oversight of contractor flight operations at Patuxent River and as such will support the E/F ITT by authorizing all EMD F/A-18E/F flights via the Naval Strike Aircraft Test Squadron daily flight schedule. The CO, Naval Strike Aircraft Test Squadron, will provide support to the F/A-18E/F ITT by assigning qualified government pilots to the F/A-18E/F ITT. The CO, Naval Strike Aircraft Test Squadron is responsible for reviewing and approving test plans. The CO Strike Aircraft Test Squadron will provide support to the F/A-18E/F ITT by assigning a senior 5.5 representative who will be empowered to approve ITT TWDS, TWD amendments, and ITT reports of test results for the CO, Naval Strike Aircraft Test Squadron.

(e) Head, T&E Engineering Department (4.11) In support of teams, Head, T&E engineering is responsible for the people, processes, and facilities to perform planning, testing, test resource management, analysis and evaluation of aircraft, weapons, and integrated systems. The Head, T&E engineering is responsible for the processes of test planning, test conduct, and reporting of test results. The Head, T&E Engineering is responsible for reviewing and approving test plans. The Head, T&E engineering will support the F/A-18E/F ITT by assigning empowered 4.11 representatives to the ITT who will be responsible for test planning, test conduct, and reporting of test results. The senior 4.11 representative on the ITT will be empowered to approve ITT TWDS, TWD amendments and ITT reports of test results for Head, T&E Engineering.

(f) Contractor Flight Test Director (CFTD) The contractor's senior representative on the ITT is responsible for the conduct of the F/A-18E/F flight test program. The CFTD is responsible for the overall management of the ITT organization (contractor and government) and for the successful execution of the ITT controlled F/A-18E/F EMD test effort. The CFTD ensures that ITT test requirements are incorporated into the Master Test Plan and associated Test Work Descriptions (TWDs) and that test results are analyzed to determine compliance with specification and design goals. The CFTD has the authority to approve ITT actions to support the day-to-day execution of the flight test program. The CFTD will have the authority to approve TWDs and TWD amendments for the contractor. The contractor is responsible for initiating required flight clearance requests. The CFTD is responsible for coordinating ITT support of all required flight clearances requests. The CFTD is responsible for coordinating all ITT inputs to required CDRL reports.

(g) Government Flight Test Director (GFTD) The government's senior representative on the ITT. The GFTD is the

F/A-18E/F Level I IPT leaders' designated representative for coordination, planning, and execution of the F/A-18E/F END flight test efforts. The GFTD acts as the central point-of-contact for official government inputs to the ITT. As the government's senior representative to the ITT, the GFTD shall be responsible for ensuring the ITT is comprised of appropriate competency personnel, that government requirements are integrated into the Master Test Plan and Test Work Descriptions (TWDs), and that test results are evaluated by the ITT to support an IPT determination of specification compliance, mission suitability, and readiness for the user. The GFTD will assure that government TWD reviews are complete. The GFTD and the senior 4.11 representative on the ITT will approve TWDs and TWD amendments for the government. The GFTD, or his designated representative, will assist the contractor in preparing flight clearance requests from the ITT to NAVAIR. The GFTD will utilize the local flight clearance control office to help coordinate ITT flight clearance requests. The GFTD is responsible to the E/F IPT leaders for the safe, efficient, and satisfactory completion of the E/F flight test program. The GFTD has the authority to approve ITT actions to support the day-to-day execution of the flight test program. The GFTD shall be responsible for coordination and scheduling of government support facilities (ranges, data stations, ship scheduling, etc.) and chase/ tanker/ target assets to support the EMD test program. The GFTD will be responsible to provide COMNAWCAD, Commander, Naval Test Wing Atlantic, and Commanding Officer, Naval Strike Aircraft Test Squadron sufficient insight into the procedures, plans, and issues related to flight safety and flight execution to ensure that EMD flights are being conducted safely and efficiently. The process for providing this insight will be agreed to between the GFTD, COMNAWCAD, Commander, Naval Test Wing Atlantic, and the Commanding Officer, Naval Strike Aircraft Test Squadron. The GFTD has the authority (delegated by the Program Manager through the E/F IPT leadership) to approve independent reports of analysis and findings when required by E/F IPT leadership. (e.g., Test Reports, Quick Response Reports, message reports, deficiency reports). This authority does not apply to CDRL reports which will continue to be approved in accordance with the existing contract procedures.

(h) Government Flight Representative (GFR) The role and responsibility of the GFR are described in the top level MOA. NAWCAD will coordinate with the Program Manager, Contracting Officer, and the DPRO to provide a designated GFR, onsite at NAWCAD, to support F/A-18E/F EMD operations. EMD flights with government pilots at NAWCAD will be authorized by the cognizant NAWCAD test activity, Naval Strike Aircraft Test Squadron via the signed flight schedule.

### 3.0 General Operating Procedures

ITT ground and flight operations will be conducted within the guidelines established within the current version of OPNAVINST 3710, NAVAIRINST 3710, GFR approved contractor procedures and applicable NAWCAD Instructions.



### 3.1 Ground Operating Procedures

(a) ITT personnel performing non-flight functions in/on the EMD aircraft must meet applicable qualifications, be fully briefed and checked-out by qualified personnel, and have prior approval from the ITT aircraft Test Conductors. The contractor will implement and document a weapons handling certification program for all contractor personnel involved in weapons handling, transportation, and loading. The contractor must provide the CO, Strike Aircraft Test Squadron's designated representative, Head, Ordnance Support Team, a formal written certification of the qualifications of personnel designated to perform explosive ordnance tasks while at NAWCAD. The Head, Ordnance Support Team will verify proper Qualification/Certification levels for all contractor personnel accomplishing explosive ordnance tasks. Explosive ordnance tasks include loading, handling, and transporting of all ordnance, including inert.

(b) All ITT maintenance activities and documentation will be conducted in accordance with GFR approved contractor maintenance procedures. ITT aircraft maintenance will be conducted such that a single consolidated method for maintenance documentation exists.

(c) Peculiar Support Equipment (PSE) will be provided by the contractor as required. Maintenance and servicing of CSE shall be accomplished in accordance with the approved Host Tenant Agreement between the contractor and NAWCAD.

(d) During all ground operating events, non-participating ITT personnel will have access to monitor operations on a not-to-interfere basis with the concurrence of the responsible Test Conductor.

(e) F/A-18E/F aircraft refueling will be conducted in accordance with applicable NAWCAD instructions.

### 3.2 Flight Operating Procedures

(a) Prior to the conduct of any contractor flight, the on-site GFR will ensure that the planned flight profile is in compliance with the current NAVAIRSYSCOM flight clearance. No contractor piloted EMD flights will be flown without an approved Form 99.

(b) ITT flight crews must meet the aircrew qualifications requirements established in pertinent NAWCAD instructions or contractor established requirements.

(c) All flights will be scheduled through the Naval Strike Aircraft Test Squadron and will be authorized via the signed Strike flight schedule.

4.0 FLIGHT CLEARANCE PROCESS The flight clearance process is described in the top level MOA. For operations at NAWCAD, the ITT will coordinate flight clearance requests with the local flight clearance office as required.

5.0 MISHAP REPORTING RESPONSIBILITIES NAVAIR (AIR-8.0H) has mishap reporting responsibility for the EMD aircraft. As such, NAVAIR (AIR-8.0H) will convene and appoint the Aircraft Mishap

Board (AMB). For EMD operations at NAWCAD, Patuxent River the onsite GFR will coordinate with the Naval Strike Aircraft Test Squadron and initiate mishap reporting in accordance with the approved Naval Strike Aircraft Test Squadron pre-mishap plan. The Naval Strike-Aircraft Test Squadron will convene its standing Aircraft Mishap Board (AMB) and retain mishap reporting responsibility until relieved by the NAVAIR appointed AMB.

6.0 AIRCREW TRAINING/QUALIFICATIONS The contractor will provide ITT training covering F/A-18E/F familiarization/ operation (including ground, flight, and manned flight simulation). NAWCAD will provide training in local test area and operation procedures prior to commencement of flying at NAWCAD. NAWCAD test aircrew assigned to the ITT will be fully qualified and certified in appropriate Test Category (Category D) per NAWCAD instructions.

7.0 CHASE SUPPORT REQUIREMENTS NAWCAD will provide chase aircraft support for F/A-18E/F flight operations at NAWCAD. Qualified contractor and government pilots will serve as chase aircraft crews. Contractor pilots may be permitted to fly as pilot in command in NAWCAD controlled chase aircraft in accordance with applicable NAWCAD instructions.

8.0 SEARCH AND RESCUE Search and Rescue (SAR) will be available in all NAWCAD test areas to support ITT flight operations. SAR will be provided by NAWCAD as specified in the Host Tenant Agreement between NAWCAD and MDA.


9.0 RANGE/INSTRUMENTATION SUPPORT REQUIREMENTS NAWCAD will provide range and instrumentation support for operations at Patuxent River. NAWCAD instrumentation personnel will be assigned to the ITT to support the installed flight test instrumentation system and provide the necessary coordination between the ITT and NAWCAD range facilities (RTPS, Chesapeake Test Range (CTR), Special Flight Test Instrumentation (SFTI) pool, Calibration Lab, etc.). NAWCAD instrumentation personnel (NAWCAD Test Article Preparation (NAWCAD 5.4)) will ensure that the Flight Test Instrumentation (FTI) installation meets the requirements of addendum 131 to MIL-D-8708B (AS). NAWCAD Test Article Preparation (NAWCAD 5.4) and NAWCAD flight clearance office personnel will provide support for flight clearance of the installed FTI system including any modifications required during the flight test program.

10.0 FACILITIES SUPPORT REQUIREMENTS Facility support requirements to support the ITT at NAWCAD Patuxent River are described in a separate Host Tenant Agreement between the contractor (McDonnell Douglas Aerospace (MDA) and the government (Naval Air Station (NAS)/Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV), Patuxent River, MD.


25 August 1995

MEMORANDUM OF AGREEMENT  
F/A-18E/F ENGINEERING AND MANUFACTURING DEVELOPMENT  
INTEGRATED TEST TEAM  
BETWEEN  
MCDONNELL DOUGLAS AEROSPACE  
**AND**  
F/A-18E/F PROGRAM MANAGER  
ANNEX B  
OPERATIONS  
AT  
NAVAL AIR WARFARE CENTER WEAPONS DIVISION  
CHINA LAKE, CA

APPROVED BY:

  
\_\_\_\_\_  
J. D. Dodd  
Captain, U. S. Navy  
Commander, Naval Test Wing Pacific (560000E)

6 SEPT 95  
Date

  
\_\_\_\_\_  
R.R. Bruckman  
Head, Carrier-Based Tactical Aircraft  
Division (411000D)

09/05/95  
Date

ANNEX B  
OPERATIONS  
AT  
NAVAL AIR WARFARE CENTER WEAPONS DIVISION  
CHINA LAKE, CA

1.0 INTRODUCTION The top level MOA discusses the responsibilities, relationships, and procedures for the conduct of the F/A-18E/F EMD flight test program. The purpose of this Annex is to augment the top level MOA and provide more specific definition of the relationships between the F/A-18E/F Program Manager, the F/A-18E/F IPT, ITT, and NAWCWD, China Lake required to support the F/A-18 E/F EMD flight test program at China Lake.

2.0 NAWCWD ROLES RESPONSIBILITIES AND AUTHORITY The organization chart for NAWCWD is shown in figure B-1. Definition of the roles, responsibilities and authority, and the relationship of key NAWCWD and key F/A-18E/F ITT and IPT personnel are defined below.

(a) Commander, Naval Air Warfare Center Weapons Division (NAWCWD 000000D) Navy executive responsible for all of the assets, personnel, and facilities of NAWCWD.

(b) Commander, Test and Evaluation (NAWCWD 5.0) Responsible for the processes and facilities required to support the planning, conduct, monitoring, and reporting of tests for the development, production, evaluation, and fielding of air warfare systems, subsystems, and support systems. The Commander, Test and Evaluation Group (NAWCWD 5.0) has responsibility for the test facilities, aircraft/weapons instrumentation, and Aircraft Reporting Custodian activities including operations, maintenance, and aviation safety for aircraft assigned at China Lake. Commander, Test and Evaluation Group shares responsibility with Leader, F/A-18 WSSA IPT for the processes of test planning, test conduct, and reporting of test results.

(c) Commander, Test Wing Pacific (NAWCWD 560000E) As the reporting custodian of all assigned aircraft to Naval Test Wing Pacific, Commander, Naval Test Wing Pacific is responsible for the care and operation of assigned aircraft and for the final approval of all activity using those aircraft. The Test Wing Pacific is responsible for developing the methodology for participation in all system testing of assigned F/A-18E/F aircraft, as well as oversight on resident contractor flight operations at China Lake.

(d) Commanding Officer (CO) Weapons Test Squadron, China Lake (NAWCWD 56C000D) The Commander, Test Wing Pacific delegates ARC responsibilities flight operations (maintenance, operations, and safety) to Commanding Officer (CO) of the Weapons Test Squadron, China Lake. **For** the F/A-18 E/F ITT, this primarily applies to NAWCWD provided chase assets. However, CO, Weapons Test Squadron China Lake is also delegated (from

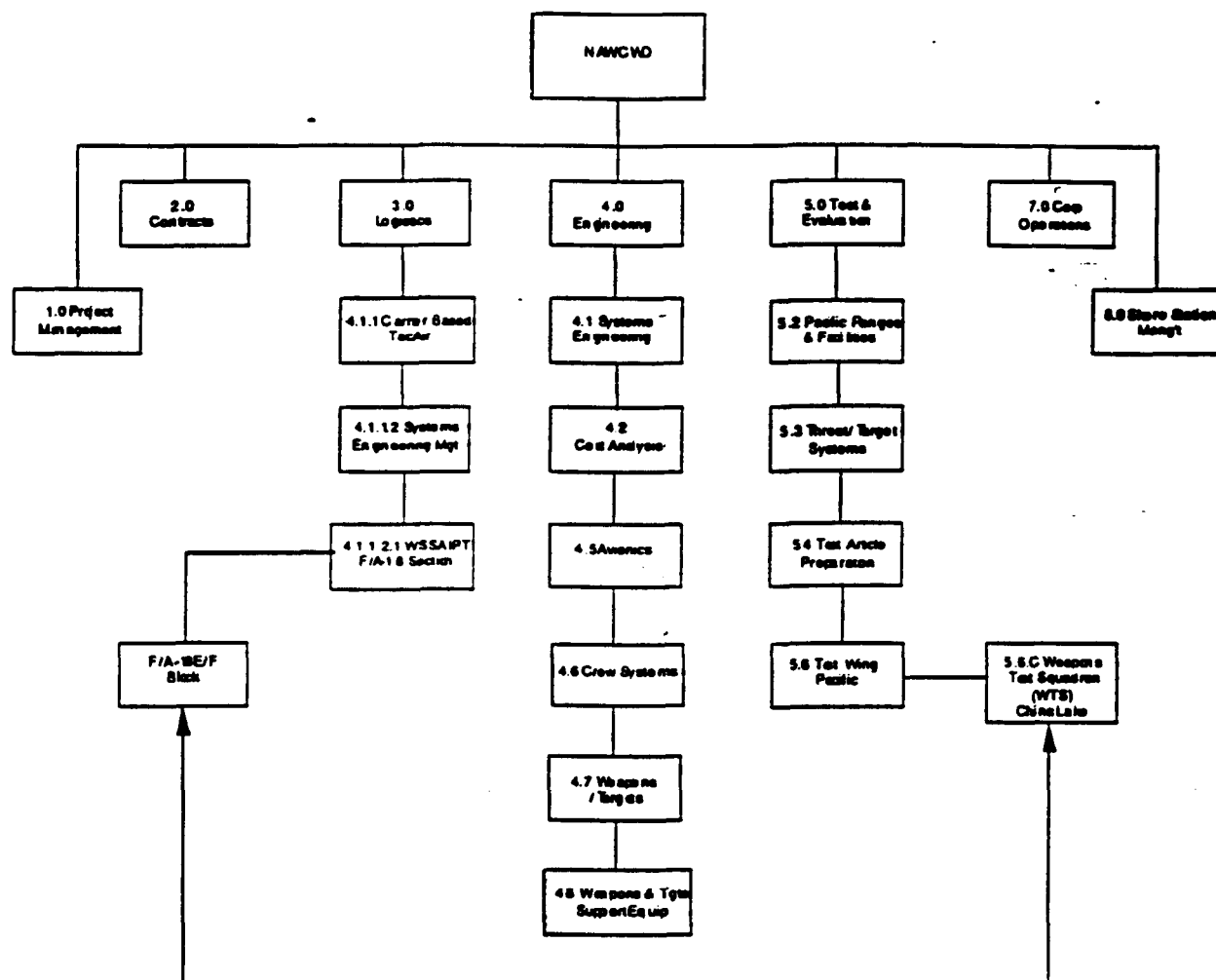


Figure B-1: NAWCWD Competency Aligned Organization

Commander, Test Wing Pacific) responsibility for oversight of contractor flight operations at China Lake and as such will authorize all F/A-18 B/F flights via the Weapons Test Squadron China Lake daily flight schedule. The CO, Weapons Test Squadron is the designated approving authority for government pilots/aircrew assigned to support the F/A-18E/F ITT. The CO, Weapons Test Squadron China Lake will certify that contractor pilots/aircrew are qualified to fly EMD and chase assets in support of the F/A-18E/F ITT. The CO, Weapons Test Squadron China Lake is responsible for reviewing and approving engineering test plans for tests conducted in support of F/A-18 E/F EMD program. The CO, Weapons Test Squadron China Lake will delegate approval of engineering test plans to Chief Test Pilot, Weapons Test Squadron China Lake. Engineering test plans will be reviewed by the NAWCWD Flight Test Review Board.

(e) Leader, F/A-18 WSSA IPT (411210D) In support of teams, the leader, F/A-18 WSSA IPT is responsible for the personnel, processes, and facilities to perform the engineering aspects of planning, testing, analysis, evaluation, and reporting of aircraft, weapons, and integrated systems. He is responsible to ensure that test results are analyzed and evaluated in conjunction with other engineering disciplines and reporting recommendations of mission suitability and readiness for OPEVAL to the F/A-18 E/F IPT Level I leaders. He will approve the Engineering Test Plans (ETPs) for missions systems testing in support of F/A-18E/F Easter Test Plan (MTP) Test and Evaluation Reference Numbers (TERN) E0904 (F/A-18 E/F Weapon system Verification and Validation ) and TERN E1410 (Weapon System TECHEVAL) and forward the approved plans to Chief Test Pilot, Weapons Test Squadron China Lake. After approval of the ETPs by Chief Test Pilot, Weapons Test Squadron, China Lake, the ETPs will be forwarded to the Government Flight Test Director (GFTD) for approval. In addition, the F/A-18 WSSA IPT will be responsible to provide the Weapons Test Squadron China Lake Commanding Officer and the GFR sufficient insight into the procedures, plans, and issues related to flight safety, and flight execution to ensure that EMD flights are being conducted safely.

(f) Lead, F/A-18 WSSA IPT, E/F BLOCK Responsibility for daily planning and conduct of ITT tests and for reports of test results will be further delegated to the Lead, F/A-18 WSSA IPT, E/F BLOCK.

(g) Contractor Flight Test Director (CFTD) The contractor's senior representative on the ITT responsible for the conduct of the F/A-18E/F flight test program. Responsibilities are stated in the main text of this document. Unexecuted TWD test points allocated to F/A-18E/F aircraft assigned to China Lake during EMD will be appended to NAWCWD engineering test plans upon request from the CFTD and the GFTD.

(h) Government Test Director (GFTD) As the government senior representative on the ITT, the GFTD is the E/F Program Manager's designated representative for coordination, planning, and execution of the F/A-18E/F EMD flight test efforts. Responsibilities are stated in the main text of this document.

Additional duties as related to weapon system Validation and Verification (V&V) and TECHEVAL testing will include approval of ETPs' in support of TERNs E0904 and E1410 and review of associated test reports. Unexecuted TWD test points allocated to F/A-18E/F aircraft assigned to China Lake during EMD will be appended to NAWCWD engineering test plans upon request from the CFTD and the GFTD.

(i) Government Flight Representative (GFR) The role and responsibility of the GFR are described in the top level MOA. commanding Officer, Weapons Test Squadron China Lake will coordinate with the Program Manager, Contracting Officer, and the DPRO to provide a designated GFR, onsite at NAWCWD, to support F/A-18 E/F EMD operations. EMD flights with contractor pilots at NAWCWD will be authorized by the Commanding Officer, Weapons Test Squadron China Lake, via the signed flight schedule.

3.0 GENERAL OPERATING PROCEDURES ITT ground and flight operations will be conducted under the guidelines established within the current version of OPNAVINST 3710, NAVAIRINST 3710, GFR approved contractor procedures and applicable NAWCWD Instructions. EMD aircraft maintenance will be accomplished by EMD contract personnel.

### 3.1 Ground Operating Procedures

(a) ITT personnel performing non-flight functions in/on the EMD aircraft must meet applicable qualifications, be fully briefed and checked-out by qualified personnel, and have prior approval from the ITT aircraft Test Conductors. The contractor will implement and document a weapons handling certification program for all contractor personnel involved in weapons handling, transportation, and loading. The contractor must provide the CO, Weapons Test Squadron's designated representative, a formal written certification of the qualifications of personnel designated to perform explosive ordnance tasks while at NAWCWD.

(b) ITT maintenance activities and documentation will be conducted in accordance with GFR approved contractor maintenance procedures. ITT aircraft maintenance will be conducted such that a single consolidated method for maintenance documentation exists.

(c) Peculiar Support Equipment (PSE) will be provided by the contractor as required. Maintenance and servicing of Contractor Support Equipment (CSE) shall be accomplished in accordance with the approved Host Tenant Agreement between the contractor and NAWCWD.

(d) During all ground operating events, non-participating ITT personnel will have access to monitor operations on a not-to-interfere basis with the concurrence of the responsible Test Conductor.

(e) F/A-18E/F aircraft refueling will be conducted in accordance with applicable NAWCWD instructions.

### 3.2 Flight Operations Procedures

(a) Prior to the conduct of any contractor aircraft flight (E/F or Chase), the on-site GFR will ensure that the planned flight profile is in compliance with the current NAVAIRSYSCOM flight clearance: No contractor EMD flight will be flown without an approved Form 99.

(b) ITT flight crews must meet the aircrew qualifications requirements established in pertinent NAWCWD instructions or contractor established requirements.

(c) All NAWCWD flights will be scheduled through the Weapons Test Squadron, China Lake (56C000D) and will be approved via the signed Squadron flight schedule.

3.3 Selection /Approval of Aircrew The Commanding Officer, Weapons Test Squadron China Lake or his designee will assign aircrew to China Lake EMD flights. He will be responsible for distribution of flights between contractor and government aircrew.

4.0 FLIGHT CLEARANCE PROCESS An authorized flight clearance will be required for all EMD flights. Flight clearances for the F/A-18 E/F test aircraft will be issued by NAVAIRSYSCOM AIR 4.3P. Flight clearance requests will be initiated by the contractor in accordance with NAVAIRINST 13034.1A. A single flight clearance will be provided which is applicable for both contractor and government ITT aircrew. The GFTD or his designated representative will assist the contractor in preparing locally generated flight clearance requests from the ITT to NAVAIR. NAWCWD will provide support for ITT flight clearances as required. In those technical areas where NAVAIR delegates flight clearance authority to NAWCWD, the ITT will coordinate flight clearance requests through the appropriate NAWCWD flight clearance office.

5.0 MISHAP REPORTING RESPONSIBILITIES NAVAIR (AIR-8.0H) has mishap reporting responsibility for the EMD aircraft. As such, NAVAIR (AIR-8.0H) will convene and appoint the Aircraft Mishap Board (AMB). For EMD operations at NAWCWD, China Lake, the onsite GFR will coordinate with the Weapons Test Squadron and initiate mishap reporting in accordance with the approved Weapons Test Squadron pre-mishap plan when contractor pilot is in command. The Weapons Test Squadron will convene its standing Aircraft Mishap Board (AMB) and retain mishap reporting responsibility until relieved by the NAVAIR appointed AMB.

6.0 AIRCREW TRAINING/QUALIFICATIONS The contractor will provide ITT training covering F/A-18E/F familiarization/operation (including ground, flight, and manned flight simulation). NAWCWD will provide training in local test area and operation procedures prior to commencement of flying at NAWCWD. NAWCWD test aircrew assigned to the ITT will be fully qualified and certified in appropriate Test Category (Category D) per NAWCWD instructions.



7.0 CHASE SUPPORT REQUIREMENTS NAWCWD will provide chase aircraft support for F/A-18E/F flight operations at NAWCWD when required. Qualified contractor and government pilots will serve as chase aircraft crews. Contractor pilots may be permitted to fly as pilot in-command in NAWCWD controlled chase aircraft in accordance with applicable NAWCWD instructions.

8.0 SEARCH AND RESCUE Search and Rescue (SAR) will be available in all NAWCWD test areas to support ITT flight operations. SAR will be provided by NAWCWD as specified in the Host Tenant Agreement between NAWCWD and MDA.

9.0 RANGE/INSTRUMENTATION SUPPORT REQUIREMENTS NAWCWD will provide range and instrumentation support for operations at China Lake. NAWCWD instrumentation personnel will be assigned to the ITT to support the F/A-18E/F installed flight test instrumentation system and provide the necessary coordination between the ITT and NAWCWD range facilities (RCC, EWTES, PT Mugu, T-PAD etc.).

10.0 FACILITIES SUPPORT REQUIREMENTS Facility support requirements to support the ITT at NAWCWD China Lake are described in a separate Host Tenant Agreement between the contractor (McDonnell Douglas Aerospace (MDA) and the government (Naval Air Warfare Center Weapons Division, China Lake, CA).